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ECONOMIC AND SOCIAL COUNCIL**



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ECONOMIC COMMISSION FOR AFRICA
African Regional Centre for Solar Energy -
Inaugural Meeting of the Council.
Addis Ababa, Ethiopia, 12-14 May 1982

**GENERAL PRINCIPLES AND POLICIES
GOVERNING THE ACTIVITIES OF THE AFRICAN REGIONAL
CENTRE FOR SOLAR ENERGY**

I. INTRODUCTION

Paragraph 3(a) of Article 7 of the Constitution of the African Regional Centre for Solar Energy states that the Council of the Centre, "shall in particular, for the purpose of achieving the objectives of the Centre, approve the general principles and policies governing the activities of the Centre".

The general principles and policies governing the activities of the Centre are derived from the Constitution of the Centre taking into account the organizational and operational aspects of the Centre.

**II. GENERAL PRINCIPLES AND POLICIES GOVERNING THE ACTIVITIES OF THE
AFRICAN REGIONAL CENTRE FOR SOLAR ENERGY**

In exercise of the powers conferred upon the Council of the African Regional Centre for Solar Energy by subparagraphs (a) to (k) of paragraph 3 of Article 7 of the Constitution of the African Regional Centre for Solar Energy (hereinafter referred to as "the Centre"), the Council of the Centre hereby prescribes the following principles and policies to govern the operation of the Centre:

1. The Centre shall be operated at all times in such a manner as to facilitate the achievement of the purposes for which it was established including those purposes enumerated in the preamble of the Constitution of the Centre.
2. The Chairman and members of the Council, the Executive Board and the Executive Director and staff of the Centre shall at all times act in conformity with paragraph 1 above. They shall also refrain from any action which may be detrimental to the objective of that paragraph.
3. The member countries of the Centre shall make every effort to create conditions favourable for the development of the Centre and the achievement of the purposes for which it was established.
4. The Council of the Centre shall give directives of a general nature to the Executive Board and Executive Director of the Centre in the performance of their functions.
5. The Council of the Centre shall from time to time prescribe such additional principles and policies governing the activities of the Centre as it may deem desirable, provided that such additional principles and policies shall not be contrary to the purposes for which the Centre was established.
6. These principles and policies and any additional principles and policies which may be prescribed by the Council of the Centre shall in no way derogate from the powers of the Council of the Centre to prescribe rules for the appointment of the staff of the Centre, to adopt rules and directives concerning the activities of the Centre in pursuance of sub-paragraphs (a), (b), (c) and (g) respectively of paragraph 3 of Article 7 of the Constitution or to exercise any other power conferred upon it under the Constitution.
7. The Council may establish such committees or subsidiary bodies from among its members as it may deem necessary. Such committees and subsidiary bodies shall determine their own procedure subject to the provisions of the rules of procedure of the Executive Board and any standing orders made under the rules of procedure of the Executive Board.
8. (a) If a member of the Council has direct or indirect personal or financial interest in any contract, proposed contract or other matter and is present at a meeting of the Council at which the contract proposed contract or other matter, is discussed he shall not take part in the discussion of or vote on it or any question related to it.

(b) A disclosure of interest made under this paragraph shall be recorded in the minutes of the meeting at which it is made.



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**FINANCIAL CONTRIBUTIONS TO THE AFRICAN REGIONAL
CENTRE FOR SOLAR ENERGY BY ITS MEMBER STATES**

I. INTRODUCTION

1. There could be three possibilities to establish the scale of assessment for the financial contributions of the members of the Centre:

- the OAU scale of assessment
- the United Nations scale of assessment
- the "weighted parameters approach" scale of assessment.

II. THE OAU SCALE OF ASSESSMENT

2. The OAU scale of assessment takes two parameters into consideration, namely: GDP and Population. According to this method:

(a) the percentage of contributions of each member State is equal to the average of the GDP, quotients of the member State concerned divided by the total GDP of all OAU member States multiplied by 100;

(b) the population of the member States concerned is divided by the total population of all OAU member States multiplied by 100;

(c) the percentage of GDP and population of each member State would be added and divided by 2 to obtain the total average percentage of the GDP and population.

3. The OAU scale used in this document is based on the statistical data covering 1979; it has been approved by the Assembly during its thirty-seventh Ordinary Session held in Nairobi, Kenya, from 15 to 21 June 1981 and will become operational starting June 1st, 1982.

4. The percentage to be contributed by each member of the African Regional Centre for Solar Energy, according to the OAU scale of assessment is given in Annex I. These percentages are calculated on the current number of members of the Centre (fourteen), which implies that with the increase in number of membership, the percentage of the contribution will decrease.

5. The percentage of contribution as illustrated in Annex I is intended to initial and regular budget of the Centre and does not take into consideration donor countries' contribution or other sources.

III. THE UN SCALE OF ASSESSMENT

6. The UN Scale of assessment takes into account the national income and per capita income. It has a minimum rate of 0.01 per cent, applies an allowance formula in establishing rates of assessment for low per capita income countries and keeps in mind the continuing disparity between the economies of developed and developing countries.

7. This scale grants a maximum relief of 75 per cent to developing countries with below \$US 1800 per capita income level. The calculation is done as follows: the difference between \$US 1,800 and per capita national income below that figure is expressed as a ratio of \$US 1,800 with 75 per cent of that ratio applied as a percentage reduction from the total national income of a member State for the purpose of assessment. Thus, when the per capita national income of a member State is less than \$US 1,800, that State receives a percentage reduction from its total national income, as illustrated below:

$$\frac{(1,800 - \text{per capita national income})}{1,800} \times 75 \text{ per cent}$$

On the other hand, when the per capita national income of a member State was equal to or greater than \$US 1,800, no reduction is made from that State's national income. At the second step, the total reduction for all countries below \$US 1,800 is distributed pro rata among all member States.

8. As it appears in Annex II, the UN scale of assessment for the contributions of member States, contrary to the terms of reference of the Committee on Contributions, contains excessive variations of assessment.

9. On the basis of UN scale of assessment, percentages were calculated for the contribution to the Centre's budget (Annex II). These percentages were calculated on the basis of the current number of member countries of the Centre (fourteen), which implies that with the increase in number of membership, the percentage of the contribution will progressively decrease.

10. The amount of contribution to the Centre on the basis of UN scale of assessment, as illustrated in Annex II, refers to the initial and regular budget of the Centre and does not take into consideration donor countries' contributions or other additional resources of financing.

IV. THE WEIGHTED PARAMETERS APPROACH SCALE OF ASSESSMENT

11. This scale of assessment has been suggested by ECA secretariat for the African Remote Sensing Council Programme. It takes into consideration a number of parameters such as GNP, income per capita, extent of involvement in specific activities by each member country, etc.

12. A full description of this scale of assessment including examples of its utilization, is given in Annex III. The parameters used in remote sensing field can be replaced by solar energy parameters to be defined and weighted by member countries of the Centre.

V. EXAMPLE OF ASSESSMENT OF CONTRIBUTION TO THE BUDGET OF THE CENTRE (INITIAL BUDGET - FIRST TWO YEARS) ON THE BASIS OF OAU SCALE

(a) Initial budget estimates (first two years) \$US 7,463,050

(b) Contribution by member countries (in \$US)

	<u>Country</u>	<u>Percentage</u>	<u>Contribution in \$US</u>
1.	Angola	4.02	300 014.61
2.	Burundi	2.15	160 455.58
3.	Djibouti	1.34	100 004.87
4.	Egypt	21.33	1 591 868.56
5.	Equatorial Guinea	1.34	100 004.87
6.	Guinea	2.76	205 980.18
7.	Ivory Coast	7.92	591 073.56
8.	Mali	3.03	226 130.42
9.	Niger	3.14	234 339.77
10.	Nigeria	26.83	2 002 336.31
11.	Sierra Leone	2.07	154 485.13
12.	Sudan	9.77	729 139.99
13.	Upper Volta	3.09	230 608.25
14.	Zaire	11.21	836 607.90
		<u>100.00</u>	<u>7 463 050.00</u>

VI. EXAMPLE OF ASSESSMENT OF CONTRIBUTION TO THE REGULAR BUDGET OF THE CENTRE (THIRD YEAR) ON THE BASIS OF OAU SCALE

(a) Regular budget estimates (one year of regular functioning)

\$US 2 783 400

(b) Contribution by member countries (In \$US)

	<u>Country</u>	<u>Percentage</u>	<u>Contribution in \$US</u>
1.	Angola	4.02	111 892.68-
2.	Burundi	2.15	49 843.10
3.	Djibouti	1.34	37 297.56
4.	Egypt	21.33	593 699.22
5.	Equatorial Guinea	1.34	37 297.56
6.	Guinea	2.76	76 821.84
7.	Ivory Coast	7.92	220 445.28
8.	Mali	3.03	84 337.02
9.	Niger	3.14	87 398.76
10.	Nigeria	26.83	746 786.22
11.	Sierra Leone	2.07	57 616.38
12.	Sudan	9.77	271 938.18
13.	Upper Volta	3.09	86 007.-6
14.	Zaire	<u>11.21</u>	<u>321 019.14</u>
	Total %	100.00	2 783 400.00

VII. EXAMPLE OF ASSESSMENT OF CONTRIBUTION TO THE INITIAL BUDGET OF THE CENTRE (FIRST TWO YEARS) ON THE BASIS OF UN SCALE

- (a) Initial budget estimates (first two years) US \$ 7,463,050
 (b) Contribution by member states (in US \$) :

	<u>Country</u>	<u>Percentage</u>	<u>Contribution</u>
1.	Angola	2.63	196,278.215
2.	Burundi	2.63	196,278.215
3.	Djibouti	2.63	196,278.215
4.	Egypt	18.42	1,374,693.810
5.	Equatorial Guinea	2.63	196,278.215
6.	Guinea	2.63	196,218.215
7.	Ivory Coast	7.90	589,580.950
8.	Mali	2.63	196,278.215
9.	Niger	2.63	196,278.215
10.	Nigeria	42.11	3,142,690.355
11.	Sierra Leone	2.63	196,278.215
12.	Sudan	2.63	196,278.215
13.	Upper Volta	2.63	196,278.215
14.	Zaire	5.27	393,302.735
		100.00	7,463,050.000

VIII. EXAMPLE OF ASSESSMENT OF CONTRIBUTION TO THE REGULAR BUDGET OF THE CENTRE (THIRD YEAR) ON THE BASIS OF UN SCALE

- (a) Regular budget estimates (one year of regular functioning)
 US \$ 2,783,400
 (b) Contribution by member countries (in US \$)

	<u>Country</u>	<u>Percentage</u>	<u>Contribution</u>
1.	Angola	2.63	73,203.42
2.	Burundi	2.63	73,203.42
3.	Djibouti	2.63	73,203.42
4.	Egypt	18.42	512,702.28
5.	Equatorial Guinea	2.63	73,203.42
6.	Guinea	2.63	73,203.42
7.	Ivory Coast	7.90	219,888.60
8.	Mali	2.63	73,203.42
9.	Niger	2.63	73,203.42
10.	Nigeria	42.11	1,172,089.74
11.	Sierra Leone	2.63	73,203.42
12.	Sudan	2.63	73,203.42
13.	Upper Volta	2.63	73,203.42
14.	Zaire	5.27	146,685.18
		100.00	2,783,400.00

OAU SCALE OF ASSESSMENT*

Country	Average percentage of contribution to OAU	Percentage of con- tribution to the Centre
	<u> </u>	<u> </u>
1. Angola	1.50	4.02
2. Burundi	0.80	2.15
3. Djibouti	0.50	1.34
4. Egypt	7.95	21.33
5. Equatorial Guinea	0.50	1.34
6. Guinea	1.03	2.76
7. Ivory Coast	2.95	7.92
8. Mali	1.13	3.03
9. Nigeria	1.77	3.14
10. Nigeria	10.00	26.83
11. Sierra Leone	0.77	2.07
12. Sudan	3.64	9.77
13. Upper Volta	1.15	3.09
14. Zaïre	4.18	11.21
	<u> </u>	<u> </u>
Total %	37.27	100.00
	=====	=====

* Report of the Ad-Hoc Committee on the review of the scales of
of assessment of the Organization of African Unity, CM/1211(XXXVII) Rev.1,
Nairobi, 15-21 June 1981.

UN SCALE OF ASSESSMENT*

	<u>Country</u>	Percent contribution	Percent contribution
		<u>to UN Budget</u>	<u>to the Centre</u>
1.	Angola	0.01	2.63
2.	Burundi	0.01	2.63
3.	Djibouti	0.01	2.63
4.	Egypt	0.07	18.42
5.	Equatorial Guinea	0.01	2.63
6.	Guinea	0.01	2.63
7.	Ivory Coast	0.03	7.90
8.	Mali	0.01	2.63
9.	Niger	0.01	2.63
10.	Nigeria	0.16	42.11
11.	Sierra Leone	0.01	2.63
12.	Sudan	0.01	2.63
13.	Upper Volta	0.01	2.63
14.	Zaire	0.02	5.27
Total %		0.38	100.00
		=====	=====

* This scale has been recommended by the Committee on Contributions to the General Assembly's thirty-fourth session (Document, "Report of the Committee on Contributions", Supplement No. 11 (A/34/11)). It applies to the UN budget for the financial years 1980, 1981 and 1982.

THE WEIGHTED PARAMETER SCALE OF ASSESSMENT

(a) Definition of the assessment parameters

The eight parameters proposed for use in establishing country assessments are represented by the symbols f1 to f8. Two of these parameters are used for the United Nations expense assessments. They are:

f1: Total national production in million of US Dollars, taken from the last available United Nations statistical report.

f2: Per capita income expressed in US Dollars extracted from the same source.

These two parameters are straightforward, and their use for country assessments is a well established procedure.

During discussions at the 1976 and 1977 intergovernmental meeting on remote sensing, some representatives expressed the wish to have more variables taken into consideration and were very specific about the relationships to be expressed. Parameters f3 to f8 are presented in an attempt to satisfy these wishes.

f3: Number of LANDSAT images required to cover the country, according to the LANDSAT Index Atlas of the Developing Countries of the World (World Bank, 1975).

f4: Integral part of the square root of f3. The number of images required to cover an individual African country vary from 129 (in the case of Algeria) to only one (in the case of Mauritius). But using large numbers would unduly complicate assessment calculations. Substituting the square root of parameter f3 does not introduce a significant deviation. Using smaller numbers brings out more clearly the impact of country size in the assessment. So using f4 should make it easier to gauge the influence of that important factor, and to decide on the weighting to be assigned to f4.

f5: The cubic root of f3 as an assessment parameter would introduce a very noticeable smoothing effect. But it reduces the number of classes to only 5, which may be too few. Using f5 may even complicate decisions about the country surface parameter and its proper weighting. Utilization of f4 is recommended, f3 as well as f5 should be dropped.

f6: The "country involvement parameter" is designed to reflect the current state of remote sensing utilization within each member States. A three-classes system has been established for test purposes with a view to obtaining further guidance from the member States (increasing the number of classes would obviously compound the problem of assigning a country a specific class). The allocation of a proper weight to the involvement parameter is a management and political decision. Member States may wish to encourage countries not involved at present in remote sensing (class 1), and thus attach a rather high weight to f6. On the other hand, their decision may be to encourage instead those countries already active in remote sensing, and therefore to attach a lower weight to parameter f6.

f7: The "data need factor" ranks the countries into five subjectively defined classes. For instance, countries that have recently acceded to independence and/or whose large territories have never been extensively analysed for resources by the colonial Powers certainly have a higher need for information about their resources: they are tentatively assigned to class 5. Most other countries are found in classes 3 and 4, indicating that they have already a reasonable amount of resources information available. None is assigned to class 1, which would indicate a very advanced level of resources information, making the utilization of remote sensing rather futile. With regard to the f7 value applicable to industrialized countries the consensus is that many have reached class 2, but that to date none has reached class 1.

f8: The "cloudiness factor" is a parameter specific to the African context. It takes into account the particular situation of member States within the tropical zone. Three classes seem appropriate to establish this classification on the basis of cloudiness data over Africa obtained by LANDSAT satellites from July 1972 onward, and daily by the TIROS and NIMBUS satellites starting in 1961. The supporting base is the series of daily cloud coverage atlases developed at the NASA Goddard Space Flight Centre, and the subregional cloudiness statistics developed therefrom. Extension of the number of cloudiness classes would seem to be of limited value.

(b) The assessment weights and their use

The assessment parameters discussed above are constant values established once and for all on the basis of specific national criteria. The parameter weights in contrast are determined by a Council decision and are valid simultaneously for all countries. They will remain valid for two years at least. After that period, they may be modified by another decision.

Country assessments must be established for a specific budget year, and can be expressed either in percentage terms or in monetary value. But the total of the individual country assessments expressed in monetary values in any given year should match the expenditure projected for that year, less donor contributions.

As ARSP may decide to adopt a two-year budgetary cycle, the following general formula is proposed:

$$E_{t+2,k} = \frac{1}{k} (w_1 f_j) \quad (1)$$

in which: E_{t+2} represents the projected expenditure for year (t+2), i.e. two years after the current calendar year.

f_i and w_j are the eight assessment parameters and their matched weightings.

$k = 1, 2, \dots, n$ are the identification indexes for the k member States participating at time (t).

The budgetary identity to be satisfied is thus:

$$E_{t+2,k} = \frac{1}{k} A_t \quad (2)$$

in which A_t represents the assessment for any k country at time t, and has the form: $A_E = w_1 f_1 + w_2 f_2 + \dots + w_8 f_8$ following formula (1) above

To compute the assessed percentage for a specific country, the rough factorial value A_t must first be established, using formula (3). When A_t has been defined, that factorial is transformable into a percentage value, after making similar calculations for all member States participating at time t. The rough A_t results are then factorized, so as to obtain a total of 100 per cent.

The procedure for the definition off the assessment weighting is illustrated in example shown below.

(c) Worked out example

Let us take Ethiopia as an example for fiscal years 1980 to 1982, i.e. two years after the present budgetary period. Ethiopia is identified by $k = 14$.

- (i) The parametric values for Ethiopia for the factors f_1 to f_8 are the following (see Annex III):

$$f_1 = 1\ 679$$

$$f_5 = 4$$

$$f_2 = 68$$

$$f_6 = 3$$

$$f_3 = 65$$

$$f_7 = 4$$

$$f_4 = 8$$

$$f_8 = 2$$

- (ii) Let the assumption be that the member States have decided in their Council to consider the following parameters as being irrelevant:

$$f_1 = \text{Total national product}$$

$$f_3 = \text{Number of LANDSAT images to cover the country}$$

$$f_5 = \text{Cubic root of that number.}$$

The weightings they have decided to impose for f_1 , f_3 and f_5 are all set equal to zero: $w_1 = w_3 = w_5 = 0$

and f_1 , f_3 and f_5 are eliminated.

- (iii) Let us now further assume that the member States have decided to consider low per capita income (f_2), high data need (f_7), and high cloudiness factor (f_8) to work in favour of any country so affected. They may for instance decide to adopt the following values for the correlated weightings:

$$\text{for } f_2: w_2 = 0.1; \text{ for } f_7: w_7 = 0.5 \text{ and for } f_8: w_8 = 0.8$$

- (iv) For f_4 (the simplified expression of the country size factor) and f_6 (the current level of country involvement in remote sensing), the member States may now decide that the proposed numerical value of the parameters (see annex III) are a fair expression of their collective views on the importance of those factors. So they should decide to apply to both of them the unit weighting:

$$w_4 = w_6 = 1$$

- (v) Combining now the individual weightings defined by the member States (now valid for assessing all member States) with the numerical values parameters (different for every member State), the rough factorial assessment values At for every State are computed. For instance, in the case of Ethiopia, and on the base of the values for from the table in .

$$\begin{aligned}\text{Assessment (Ethiopia, 1978)} &= (0 \times 1679) + (0.1 \times 68) + (0 \times 65) \\ &+ (1 \times 8) + (0 \times 4) = (1 \times 3) \\ &+ (0.5 \times 4) + (0.8 \times 2) \\ &= (6.8 + 8.0) + (3.0 + 2.0) + 1.6 = \underline{21.4}\end{aligned}$$

- (vi) Rough factorial At values for all member States are computed according to the same agreed weighting and procedure. The rough factorial values are then added, and the percentages for every member State are assessed. Obviously, the member States may also decide on minimum and maximum percentages, in which case the calculation flow should be adapted accordingly.

(d) Evaluation

The difficulty inherent in the weighted parameter approach lies in its APPARENT intricacy, but that in itself imposes on the member States the obligation to select a system of assessment based on principles jointly agreed upon and then to translate those principles into normative weightings applicable to all. After a decision on the weightings is taken, the rest becomes a mathematical routine. Weighting re-evaluation should occur only on the occasion of future Council meetings. The advantage of the parameteric approach is that it would allow every factor proposed by the member States to be taken fully into account and ranked by order of relevance.

Parametric values proposed for the establishment
of the country assessments

K	Parameters	F1	F2	F3	F4	F5	F6	F7	F8
Ref. No.	COUNTRY	Total National income (millions of US dollars)	Per capita National income (US dollars)	Number of LANDSAC images for country on page	Integral value of square root of F3	Integral value of cubic root of F3	National level of involvement $\frac{F2}{F3}$	Data efficiency factor (needed fact) $\frac{F2}{F3}$	Cloudiness factor $\frac{F2}{F3}$
1	Algeria	4 142	282	122	51	5	1	4	1
2	Angola	1 587	289	65	8	4	1	5	3
3	Benin	218	81	10	3	2	1	3	3
4	Botswana	76	113	37	6	3	3	4	1
5	Burundi	220	68	4	2	1	3	4	2
6	Cape Verde	.....	.....	6	2	1	1	3	2
7	Central African Empire	196	122	51	6	3	3	4	1
8	Chad	256	70	71	8	4	3	3	1
9	Comoros	26	27	4	2	1	1	3	1
10	Congo	264	281	22	5	3	3	4	3
11	Djibouti	.....	.....	4	2	1	1	3	2
12	Egypt	6 721	202	60	8	4	2	3	1
13	Equatorial Guinea	72	251	3	2	1	1	4	1
14	Ethiopia	1 679	58	65	8	4	3	4	2
15	Gabon	234	468	2		2	1	4	3
16	Gambia	42	138	4	2	1	1	3	2
17	Ghana	2 036	236	20	4	2	3	3	3
18	Guinea	310	79	21	5	2	1	3	2
19	Guinea-Bissau	121	216	6	2	1	1	3	2
20	Ivory Coast	1 400	115	71	5	2	3	3	3
21	Kenya	1 406	131	33	6	3	2	4	1
22	Lesotho	71	77	4	2	1	3	3	1
23	Liberia	274	181	11	3	2	1	4	3
24	Libyan Arab Jamahiriya	2 813	1 450	93	10	5	2	4	1
25	Madagascar	854	127	40	6	4	1	4	1
26	Malawi	303	68	12	3	2	1	4	1
27	Mali	252	50	77	9	4	3	4	1
28	Mauritania	171	146	62	8	4	1	4	1
29	Mauritius	180	223	1	1	1	1	3	1
30	Morocco	3 298	225	33	6	3	3	3	1
31	Mozambique	1 779	228	54	7	4	1	5	1

k	Parameters	f1	f2	f3	f4	f5	f6	f7	f8
		Total National income (millions of US dollars)	Per capita National Income (US dollars)	Number of LANDSAT images for country coverage	Integral value of square root of f3	Integral value of cubic root of f3	National level of involvement ^{a/}	Data efficiency factor ^{b/} (needed fact.)	Cloudiness factor ^{c/}
32	Niger	283	70	69	8	4	3	4	1
33	Nigeria	7 176	130	50	7	4	2	4	3
34	Rwanda	208	57	4	2	1	1	3	2
35	Sao Tome and Principe	.....	.....	4	2	1	1	3	1
36	Senegal	788	207	13	4	2	1	3	1
37	Seychelles	.....	.....	4	2	1	1	3	2
38	Sierra Leone	402	158	8	3	2	1	3	2
39	Somalia	237	85	43	6	3	1	4	1
40	Sudan	1 714	109	125	11	5	3	4	1
41	Swaziland	88	215	2	1	1	3	3	1
42	Togo	247	125	9	3	2	1	3	3
43	Tunisia	1 316	257	17	4	2	1	3	1
44	Uganda	1 242	127	15	4	3	3	3	2
45	United Republic of Cameroon	1 069	183	15	6	3	1	4	2
46	United Rep. of Tanzania	1 206	94	50	7	3	3	4	2
47	Upper Volta	333	62	17	4	2	2	4	1
48	Zaire	2 558	119	120	111	5	2	5	3
49	Zambia	1 442	345	46	7	4	1	4	1
50	Namibia	.....	.....	53	7	4	1	4	1

Notes:

a/ National level of involvement is defined as follows:

1 = Potential for involvement;

2 = Country hosting ARSC facility;

3 = Country participating in ARSC preparatory activity.

b/ Countries with the greatest need for resources data are in class 5. Lesser needs are indicated by "4" and "3".

c/ Classification "1" is given to countries for which cloudiness level is immaterial to space data utilization, whereas countries such as Zaire and those on the West African coast have been placed in class 3.



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ECONOMIC COMMISSION FOR AFRICA

African Regional Centre for Solar Energy -
Inaugural Meeting of the Council

Addis Ababa, Ethiopia, 12-14 May 1982

**RULES OF PROCEDURE OF THE EXECUTIVE BOARD
OF THE AFRICAN REGIONAL CENTRE FOR SOLAR ENERGY**

The following rules of procedure are in no way intended to modify the provisions of the Constitution of the Centre, and should therefore be read in conjunction with the Constitution, as approved by the member States of the Centre. In case of any inconsistency between these rules and the Constitution, the Constitution shall prevail.

GENERAL PROVISIONS

Rule 1

The Executive Board of the African Regional Centre for Solar Energy shall meet in ordinary session at least once a year at the Headquarters of the Centre or at such other places as the Executive Board may decide.

Rule 2

The Executive Board may hold extraordinary meetings at the request of its Chairman or of at least two thirds of its members.

Rule 3

(a) Any member of the Executive Board, other than the Chairman of the Executive Board or the Executive Director of the Centre shall cease to be a member of the Executive Board upon receipt by the Secretary of ~~the Executive Board~~ of a notice in writing of the revocation of his appointment by the Government which appointed him to be a member of the Executive Board, and that Government shall as soon as possible appoint another member of the Executive Board.

(b) If the Executive Board is satisfied that one of its members other than the Chairman of the Executive Board or the Executive Director of the Centre has been absent from two consecutive meetings of the Executive Board without informing the Secretary of the Executive Board of the reason for such absence as soon as possible, is incapacitated by prolonged physical or mental illness or is otherwise unable or unfit to discharge the functions of a member of the Executive Board, the Executive Board may advise the Government which appointed such a member of its findings.

(c) The validity of any act or proceedings of the Executive Board shall not be affected by any vacancy among the members thereof, or by any defect in the appointment of any member thereof, or by reason that some person who was not entitled to do so took part therein.

Rule 4

The Secretary of the Executive Board, that is, the Executive Director of the Centre, shall convey to the members of the Executive Board information concerning all meetings of the Executive Board by letter at least two months in advance of the meeting concerned.

Rule 5

Upon receipt of notice of a meeting, each member of the Executive Board shall notify the Secretary, at least two weeks in advance, whether or not he intends to attend the meeting.

Rule 6

A simple majority of the members of the Executive Board shall constitute a quorum.

Rule 7

Members who cannot attend a meeting may delegate their voting rights to another member of the Executive Board, provided that the member is not already representing another member. A letter of authorization for any such delegation of voting rights should be handed to the Secretary before the meeting.

Rule 8

Observers may be invited to attend and participate in any meeting of the Executive Board without the right to vote.

Rule 9

In addition to exercising the powers conferred upon him elsewhere in these rules, the Chairman shall declare the opening and closing of each meeting of the Executive Board. He shall direct the discussions at meetings, ensure the observance of these rules, call on speakers, put questions to the vote in accordance with the procedure laid down in the Constitution of the Centre and announce the results of the voting.

CONDUCT OF BUSINESS

Rule 10

The Chairman of the Executive Board or his representative shall personally preside over all meetings of the Executive Board. In their absence, the members shall appoint one of their number, other than the Secretary, to preside.

Rule 11

During the discussions, a member may at any time raise a point of order, which shall immediately be decided by the Chairman in accordance with these rules of procedure. A member may appeal against the ruling of the Chairman, such an appeal shall immediately be put to the vote, and the Chairman's ruling shall stand unless overruled by a majority of the members present and voting. A member raising a point of order may not speak on the substance of the matter under discussion.

Rule 12

The Executive Board may, at the suggestion of the Chairman, limit the time to be allowed to each speaker on any particular subject under discussion.

Rule 13

(a) Subject to the provisions of Rule 11, the following kinds of motion shall have precedence, in the order shown, over all other proposals or motions before the meeting:

- (i) to suspend the meeting;
- (ii) to adjourn the meeting;
- (iii) to adjourn the debate on the item under discussion;
- (iv) for the closure of the debate on the item under discussion.

(b) Permission to speak on motions in the four categories mentioned in sub-paragraph (a) of this Rule shall be granted only to the speaker proposing the motion and to one speaker in favour of the motion and two against it after which it shall be immediately put to the vote.

Rule 14

Proposals and amendments to them shall normally be submitted in writing to the Secretary of the Executive Board, who shall circulate copies to the members. As a general rule, no proposal or amendment shall be discussed or put to the vote at any meeting of the Executive Board unless copies of it have been circulated to all members not later than the day preceding the meeting. The Chairman may, however, permit the discussion and consideration of amendments even though they have not been circulated, or have only been circulated the same day.

Rule 15

A motion may be withdrawn by its proposer at any time before voting on it has begun, provided that it has not been amended and that an amendment to it is not under discussion. A motion thus withdrawn may be reintroduced by any member.

Rule 16

When a proposal has been adopted or rejected it may not be reconsidered at the same session of the Executive Board unless a two-thirds majority of the members present and voting so decides. Permission to speak on a motion to reconsider shall be accorded only to the mover and one other supporter and to two speakers opposing the motion, after which it shall be immediately put to the vote.

Rule 17

(a) Subject to the provisions of Article 15 of the Constitution of the Centre and Rules 16, 23 and 24 of these Rules of Procedure, decisions of the Executive Board shall be taken by a simple majority of the members present and voting.

(b) All members of the Executive Board except the Secretary shall have one vote each.

(c) If a vote is equally divided, the Chairman shall cast the deciding vote.

(d) For the purpose of these rules, the phrase "members present and voting" means members casting an affirmative or negative vote. Members who abstain from voting or who cast an invalid vote shall be considered as not voting.

Rule 18

The Executive Board shall normally vote by a show of hands. However, any member may request a roll-call vote, which shall be taken in alphabetical order of the names of the members participating in the meeting, beginning with the State whose name is drawn by lot by the Chairman. The vote of each member participating in a roll-call vote shall be inserted in the minutes of the meeting concerned.

Rule 19

(a) Parts of a proposal or amendments to a proposal shall be voted on separately if the Chairman, with the consent of the sponsor, so decides or at the request of any member with the consent of the sponsor. If the sponsor objects, permission to speak on the point shall be given first to the speaker proposing that the proposal or amendment be put to the vote in parts and then to the sponsor of the proposal or amendment under discussion, after which the motion to divide the proposal or amendment shall be immediately put to the vote.

(b) These parts of a proposal which have been approved shall then be put to the vote as a whole; if all the operative parts of the proposal or amendment have been rejected, the proposal or amendment shall be considered to have been rejected as a whole.

Rule 20

(a) A motion is considered to be an amendment to a proposal if it adds to, deletes from or revises that proposal. An amendment shall be voted on before the proposal to which it relates is put to the vote.

(b) If two or more amendments are moved to a proposal, the Executive Board shall first vote on the amendment furthest removed in substance from the original proposal and then on the amendment next furthest removed therefrom and so on, until all amendments have been put to the vote. When, however, the adoption of an amendment necessarily implies the rejection of another amendment, the latter amendment shall not be put to the vote.

Rule 21

If two or more proposals relate to the same question, the Executive Board shall, unless it decides otherwise, vote on the proposals in the order in which they have been submitted. The Executive Board, may, after each vote on a proposal, decide whether to vote on the next proposal.

Rule 22

The Executive Board may make standing orders with respect to the holding of meetings of the Executive Board, the notices to be given of such meetings and the proceedings then, the keeping of minutes of such proceedings and the custody and production for inspection of such minutes, provided that such standing orders are not inconsistent with these rules of procedure.

Rule 23

Any of these rules may be suspended by a two-thirds majority vote of the Executive Board, provided that 24 hours' notice of the proposal for the suspension has been given. The notice may be waived if no member objects.

Rule 24

Any of these rules may be amended by a two-thirds majority vote of the Executive Board in full session provided that two months' notice of the proposal amendment has been given.

Rule 25

Subordinate bodies of the Executive Board shall follow these rules of procedure in so far as they are applicable.

Rule 26

Before the closing of each meeting of the Executive Board, the place and date of the next meeting shall be decided.



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Inaugural Meeting of the Council

Addis Ababa, Ethiopia, 12-14 May 1982

DRAFT WORK PROGRAMME AND BUDGET OF THE AFRICAN REGIONAL CENTRE
FOR SOLAR ENERGY

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I. INTRODUCTION

1. As far as can be envisaged during the period from immediately after the Inaugural Meeting of the Council and election of the Executive Board until June 1984 the African Regional Centre for Solar Energy (ARCSE) will be preoccupied with the difficult task of laying the foundations for its operational stages. This will include establishment of basic support services during the interim period, building of the headquarters of the secretariat, recruitment of a nucleus and other staff, training of the Centre's staff and general familiarization with the problems related to new and renewable sources of energy (NRSE) in the member States. These are essential initial tasks to which the secretariat is expected to devote the first two years.

2. The draft work programme for this period is a tentative one, based on several assumptions regarding availability of financial resources and staff and the pace at which the Centre attains operational status.

II. SUMMARY OF ACTIVITIES OF THE ARCSE DURING THE FIRST TWO YEARS

3. The activities to be carried out during the first two years are tentatively divided in four phases:

(a) Preliminary phase includes recruitment of personnel for Interim Secretariat period of 7 months starting June 1982 (one CTA, two energy consultants and one secretary). This personnel will define the functioning and immediate recruitment of a consultancy

team for the implementation of the second phase. This personnel will define the functioning of the Centre in light of the decisions taken by the Inaugural meeting of the Council will initiate recruitment of the unucleous of the Centre (Executive Director, Deputy Executive Director, CTA, sectoral Directors), will define the staffing of the Units of the Centre; and will define the laboratories and training equipment.

(b) Second phase, which will last also 7 months, in parallel with the preliminary phase, is dedicated to the preparation of design studies for building, laboratories and workshops; to the preparation of equipment specifications and acquisition and storage of equipment. One Chief Designer, one architect, one building engineer, two technologists, one economist and one secretary will be involved by this phase.

(c) Third phase has a duration of 17 months and will be dedicated to the construction of the main building which includes the Secretariat offices, training classes, conference hall and laboratories, construction of workshops and garage building; installation of equipment; preparation of experimental site and recruitment of the remaining staff of the Centre. This phase will imply a separate project prepared by the recruited team of experts during the second phase.

(c) Fourth phase has a duration of 7 months, overlapping the last 7 months of the third phase. It will be dedicated to the provision of training support to the Centre's staff as follows:

- initiation of the Centre's personnel in the activities related to development and utilization of NRSE at regional level;

- preparation of R & D, training and experimental manufacturing programmes of the Centre;

It relies on the personnel of the second phase (without architect) who will perform the above duties, and on a newly recruited training expert, for a period of seven months only.

III. SUMMARY OF REGULAR ACTIVITIES OF THE ARCSE DURING THE THIRD YEAR

4. It is assumed that starting with the third year, the Centre will become fully operational and will carry out its regular activities through the following units:

(a) Administration Unit shall deal with Personnel, Finance, Conferences and General Services matters. It develops and implements administrative and finance policies and procedures of the Centre and undertakes, inter alia, special activities such as:

- (i) mobilization of external financial aid for the implementation of projects on NRSE development and utilization at national, subregional and regional levels;

- (ii) mobilization of funds for regional programmes related to design and manufacturing of equipment using NRSE;
- (iii) study the establishment of financial institutions specialized in the field of NRSE at national, subregional and regional levels and securing co-ordination of their activities;
- (iv) enter into contracts of research and development with national and subregional centres.

As far as Conferences matters are concerned, the Unit follows up the regular programme of meetings, providing support in translation, interpretation, reproduction etc.

Concerning general services, it ensures the maintenance of buildings, laboratories and auxiliary equipment of the Centre.

(b) Documentation and Information Unit works towards the establishment of a data bank on solar energy and its derivatives; organizes a continuous exchange of information with national, subregional, regional and international organizations involved in solar, wind and biomass energy activities; disseminates results of solar energy studies elaborated in the region or elsewhere in the world; ensures that research findings are made the common property of the member States; organizes the library and its activities; advise on, and support the establishment of national documentation units on NRSE; undertakes popularization of NRSE development and utilization, etc.

(c) Energy Strategy and Co-operation Unit is involved in the following activities:

- (i) elaboration of an energy strategy at national, sburegional and regional levels;
- (ii) allignment of the elaborated strategy with the African Strategy for development and utilization of NRSE and adapt it to the national, sub-regional and regional needs;
- (iii) advising and participation in the elaboration of national energy policies, national programmes for development and utilization of NRSE and integration of these programmes into overall economic development of specific areas or countries;
- (iv) elaboration of models of programmes for the inventory of NRSE and related needed manpower in Africa;

- (v) preparation of short-, medium- and long-term strategies for research and development of NRSE in Africa, at all levels, including transfer and adaptation of technology;
- (vi) formulation of programmes and policies for information and training in the field of NRSE at all levels in Africa;
- (vii) advising in the assessment of energy needs and supply at all levels in Africa;
- (viii) co-ordinating research, development and applications activities in the field of NRSE in Africa;
- (ix) strengthening of the existing centres and encouraging the establishment of new national centres as necessary and establish subregional centres for purposes of liaison and co-ordination in the field of research and development of solar energy utilization in Africa;
- (x) promote multinational co-operation with regard to the practical use of solar, wind and biomass energy.

(d) Research and Applications Unit has the responsibility of the implementation of research, development, transfer and adaptation of technology and test activities in three fields: solar, wind and biomass energy.

It strengthens research in solar energy and its derivatives and undertakes experimentation and applications of such energy at national, subregional and regional levels in Africa. The Unit also supports member States in carrying out fundamental research and in carrying out research and products development.

- (i) In the field of solar energy, the activities are focussed on research, development experimentation and tests in the photovoltaic field such as production of electricity, water pumping and air conditioning/refrigeration and in the thermodynamic field such as heating, drying, distillation, cooking, water pumping and cooling. Inventory of solar energy potential and measurement of solar radiation are carried out and systematized respectively.
- (ii) In the field of wind energy, the activities are concentrated on inventory of wind energy potential, research development, experimentation and tests of equipment and applications in such fields as water pumping, production of electricity, energy storage, etc.

- (iii) In the field of biomass energy, the activities are also concentrated on inventory of its potential, on research, applications and tests in such directions as methanization, direct combustion, pyrolysis/gasification and production of methanol and ethanol.

The activities of the Research and Applications Unit are cross-related to the activities of all technical Units of the Centre including training activities.

(e) Design Manufacturing and Maintenance Unit undertakes activities in close co-operation with Research and Applications Unit in the field of prototypes designing, manufacturing and experimentation. It also tests products, systems or appliances for performance, reliability and adaptability. The Unit popularizes manufacturing of equipment using locally available raw materials and organizes demonstration of equipment using solar, wind and biomass energy. It participates in training programme of the Centre and undertakes maintenance of vehicles, working equipment and demonstration site equipment of the Centre.

(f) Training Unit prepares and implements the training programme of the Centre, including fellowships, ensures training of the Centre's staff, organizes meetings, seminars, study tours etc., assists in formulating and implementing national training programmes in the field of NRSE and provides expertise to the national and subregional centres involved in solar, wind and biomass energy activities. This Unit draws upon the expertise of other Units in particular Research and Applications Unit and Design, Manufacturing and Maintenance Unit.

IV. SOURCES OF REVENUE

5. The financial resources of the Centre shall consist of annual and special contributions from the member States of the Centre; assistance, aid, loans, gifts, bequests or grants from Governments, international organizations, financial institutions, public or private institutions, associations, juridical or individual persons; and fees and other charges levied by the Centre for services rendered under the provisions of its Constitution.
6. Subject to such financial regulations as the Council may make, the budget of the Centre shall be administered by the Executive Director of the Centre under the supervision of the Executive Board.
7. The Executive Director and Deputy Executive Director of the Centre may, with the approval of the Executive Board, receive directly gifts, bequests, aid and other resources from Governments, public, private and international institutions, associations juridical or individual persons and from Governments, States or institutions with which the Centre has established relations under the provisions of Article 13 of its Constitution, and may for this purpose, enter into related agreements.

(a) Contributions from African Governments

8. Whatever other sources of financing may materialize, it must be stressed that the African Governments must accept fundamental responsibility for financing the activities of the Centre. It is expected therefore that the member States of the Centre will come to an agreement concerning the sharing of expenses by working out a formula to govern the regular contributions each Government would make. This practice of sharing expenses is familiar to African countries which are members of the United Nations, OAU, ADB and many other world, regional and subregional organizations which are financially supported by participating Governments.

9. The secretariat is proposing that the Executive Board when it will be elected should adopt, possibly on a provisional basis, scale of assessment approved by the OAU Assembly of Heads of State and Government in 1981 for contributions by member States of the Centre towards its regular budget.

10. In addition to regular contributions by the member States of the Centre, the Council or the Executive Board might consider soliciting special donations from African Governments to help the Centre establish its basic support services as rapidly as possible.

11. It is of immediate importance that the Council should take a decision at its inaugural meeting on the provision of funds for the initial and regular budget of the Centre as illustrated in Annex II and III

(b) Grants from developed countries

12. It is well known that emerging institutions succeed in attracting financial grants from aid-giving organizations and Governments in the developed countries. Such grants take several forms: provision of specialist personnel, equipment, fellowships, and so on. Some of these grants are provided as funds-in-trust for specific projects to be agreed on between the donor and the recipient institution.

13. Should the Executive Board, when it will be elected consider it worth while to follow up this line of action, the secretariat is prepared to assist it.

(c) Contributions from the United Nations and its specialized agencies

14. The secretariat expects that representatives of various United Nations bodies and specialized agencies attending the inaugural meeting of the Council will be in a position to indicate the nature of assistance which their respective organizations would be willing to offer to the Centre.

(1) Other sources

15. Grants from African investment and development institutions and technical assistance from bilateral and multinational sources are other suggested sources. The Council and the Executive Board are invited to provide specific guidance to the secretariat concerning arrangements for tapping such possible sources of finance.

V. DRAFT WORK PROGRAMME AND BUDGET OF THE ARCSE FOR THE FIRST THREE YEARS

16. The draft work programme of the Centre reflects the activities of the Centre as described under Chapters II and III. It covers three years and is divided in five phases: phase one through four cover the first two years (Annex I) and have a corresponding initial draft budget (Annex II). The phase five corresponds to the third year and reflects regular activities of the Centre with complete staff and equipment (Annex I). The budget for this phase is given in Annex III. Details of cost of the Centre's buildings and equipment are given in Annex IV. Finally, planning of activities for the first two years of the Centre is given in Annex V in the form of a schematic diagram.

17. The regular work programme which covers the third year (phase five) refers to technical aspects only and is presented in a general manner without breaking down the objectives by Unit. It is assumed that each Director of the Unit concerned will elaborate a detailed work programme based on the guidelines provided by this work programme.

DRAFT WORK PROGRAMME OF ARCSE FOR THE PERIOD JUNE 1982 - MAY 1985

<u>Activity</u>	<u>Timing</u>
1. <u>Preliminary phase</u>	<u>June 1982 - Dec. 1982</u>
(a) Establishment of Interim Services for the Centre	June 1982
(b) Preparation of detailed financial regulations, staff rules and regulations or other administrative manuals	Oct. 1982 - Dec. 1982
(c) Definition of the functioning of the Centre in the light of the decisions taken by the Inaugural Meeting of the Council	June 1982 - Oct. 1982
(d) Recruitment of initial staff: Initiate recruitment of the nucleus staff of the Centre: Executive Director, Deputy Executive Directors, Sectoral Directors	June 1982 - Nov. 1982
(e) Definition of the staffing of the Sectoral Units	August 1982 - Nov. 1982
(f) Definition of laboratories and training equipment	July 1982 - Dec. 1982
(g) Recruitment of Consultancy Team for implementation of the Second phase of the project	June 1982 - Nov. 1982
(h) Formulation of a detailed work programme for 1983	Nov. 1982
2. <u>Second phase</u>	<u>June 1982 - Dec. 1982</u>
(a) Preparation of design studies for building - laboratories and workshops	July 1982 - Dec. 1982
(b) Preparation of equipment specifications	Aug. 1982 - Dec. 1982
(c) Acquisition of equipment	Oct. 1982 - Dec. 1982

3. Third phaseJan. 1983 - May 1984

- (a) Construction of buildings Feb. 1983 - Feb. 1984
- (b) Installation of equipments June 1983 - May 1984
- (c) Preparation of experimental site Dec. 1983 - May 1984
- (d) Recruitment of the complementary staff of the Centre Jan. 1983 - May 1984
- (e) Putting running services and basic installations Jan. 1983 - Feb. 1984
- (f) Formulation of a detailed programme of work for 1984
with projection to 1985 Oct. 1983 - Dec. 1983
- (g) Organization of three subregional training
seminars on NRSE
 - 1st Seminar Nov. 1983
 - 2nd Seminar Feb. 1984
 - 3rd Seminar July 1984

4. Fourth phaseNov. 1983 - May 1984

- (a) Identification of training needs in the fields
of NRSE through consultations and contacts with
Governments and the public and private sectors
in various African countries Nov. 1983 - May 1984
- (b) Training of the staff of the centre in the
activities related to NRSE at regional level
and in the activities of the Centre Nov. 1983 - May 1984
- (c) Elaboration of R & D, training, and manufacturing
programme of the Centre March 1984 - May 1984
- (d) Organisation of the Centre's library and information
support March 1984 - May 1984

- (e) identification of needs for technological information as a factor in the development and transfer of technology among African countries and design of a system to meet these needs to insure the integration at African level of techniques of use of NRSE
March 1984 - May 1984
- (f) Organization of two subregional training seminars on NRSE
- 1st Seminar
2nd Seminar
Oct. 1984
Dec. 1984
- (g) Compilation of a register or registers of African institutions in R & D development of use of NRSE
Nov. 1983 - May 1984
- (h) Establishment of basic support services and arrangements for providing consultancy services to member States
Nov. 1983 - May 1984
- (i) Consultancy missions to African countries in response to specific needs in the field of NRSE
Nov. 1983 - May 1984
- (j) Assistance in planning and establishing national centres for NRSE
Dec. 1983 - May 1984
- (k) Organization of a Regional Seminar for senior government experts to familiarize them with the energy planning problems at national level
May 1984
5. Fifth phase
June 1984 - May 1985
- (a) Introduction into the national development plans, with priority status, of projects for the development and utilization of solar, wind and biomass energy
- (b) Preparation of training programmes in the field of NRSE and their introduction into school and university curricula

- (c) Implementation of priority research, experimentation and fundamental research programmes as prepared during the phase four
- (d) Organization and implementation of a comprehensive assistance programme to member States in the field of fundamental research
- (e) Assistance to the existing national centres for the implementation of their research programmes and support in the establishment of new national and subregional centres
- (f) Promotion of multinational co-operation with regard to development and utilization of solar, wind and biomass energy
- (g) Manufacturing of prototypes, their experimentation and dissemination of technical sheets
- (h) Interconnexion of the Centre's data bank on NRSE with PADIS
- (i) Organization of seminars on: energy strategy, energy planning, solar energy, wind energy, biomass energy, co-operation in the field of NRSE and energy potential assessment as part of the Centre's training programme
- (j) Organization of exhibitions, study tours, demonstration site of the Centre and national demonstration centres; participation in trade-fairs
- (k) Carrying out of tests on products, systems or appliances for performance, reliability and adaptability

DRAFT BUDGET ESTIMATES OF ARCS PERSONNEL
FOR THE FIRST THREE YEARS

	1st Phase		2nd Phase		3rd Phase		4th Phase		5th Phase	
	June-Dec. 1982 (7 months)	US\$	June-Dec. 1982 (7 months)	US\$	Jan. 1983-May 1984 (17 months)	US\$	Nov. 1983-May 1984 (7 months)	US\$	June 1984-May 1985 (12 months)	US\$
	m/m		m/m		m/m		m/m		m/m	
A. NUCLEOUS STAFF										
1. Executive Director	4	8 000	-	-	17	34 000	-	-	12	24 000
1 Deputy Executive Director	4	8 000	-	-	17	34 000	-	-	12	24 000
1 CTA	7	12 600	-	-	17	30 600	-	-	12	21 600
1 Admin. Director	4	7 200	-	-	17	30 600	-	-	12	21 600
7 Technical Directors	28	50 400	-	-	119	214 200	-	-	84	151 200
1 Secretary	4	3 200	-	-	12	9 600	-	-	-	-
Travel	-	80 000	-	-	-	33 000	-	-	-	25 000
Miscellaneous	-	14 000	-	-	-	39 000	-	-	-	28 000
Sub-total	51	183 400	-	-	199	425 000	-	-	132	295 400
B. CONSULTANCY TEAM										
1 Chief designer	-	-	5	25 000	17	85 000	-	-	-	-
1 Architect	-	-	5	25 000	17	85 000	-	-	-	-
1 Building engineer	-	-	5	25 000	17	85 000	-	-	-	-
3 Technologists	-	-	10	45 000	-	-	14	63 000	-	-
1 Economist	-	-	5	22 500	-	-	7	31 500	-	-
1 Training Expert	-	-	-	-	-	-	7	31 500	-	-
1 Secretary	-	-	5	4 000	17	13 600	-	-	12	54 000
Travel & DSA	-	-	-	74 000	-	120 000	-	75 000	-	34 000
Miscellaneous	-	-	-	19 850	-	38 400	-	20 000	-	12 000
Sub-total	-	-	35	240 350	68	427 000	28	221 000	12	100 000
C. REGULAR STAFF (other than nucleous)										
Salaries 126 staff members (Annex III)	-	-	-	-	756	738 000	882	861 000	1512	1 476 000
Travel for 63 staff and families to duty st.	-	-	-	-	-	252 000	-	-	-	-

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Annex II

	1st Phase				2nd Phase				3rd Phase				4th Phase				5th Phase			
	June-Dec. 1982				June-Dec. 1982				Jan. 1983-May 1984				Nov. 1983-May 1984				June 1984-May 1985			
	(7 months)				(7 months)				(17 months)				(7 months)				(12 months)			
	m/m	US\$	m/m	US\$	m/m	US\$	m/m	US\$	m/m	US\$	m/m	US\$	m/m	US\$	m/m	US\$	m/m	US\$	m/m	US\$
Travel on missions	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Miscellaneous	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sub-total	-	-	-	-	-	-	-	-	756	1 060 300	-	-	882	1 006 000	-	-	1512	1 656 000	-	-
D. TRAINING SUPPORT AND FELLOWSHIPS																				
Fellowships, study tours, seminars etc.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sub-total	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
E. MAINTENANCE																				
Administration, etc.																				
Sub-total																				
T O T A L	51	183 400	35	240 350	1023	1 912 300	910	1 227 000	1656	2 783 400										

for Phase 1 through 4 please see Annex IV

GRAND TOTAL: US\$6 346 450

DRAFT ANNUAL BUDGET ESTIMATES FOR ARCSE'S REGULAR ACTIVITIES

A. PERSONNEL SALARIES

Staff	Category	Number	Monthly Net Salary (in US\$)	Yearly Salary (in US\$)
1. Ex. Director and Deputy	D1	2	2 000	48 000
2. Senior Staff	P5	9	1 800	194 400
Sub Total		11	-	242 400
3. Professionals	P4	24	1 400	403 200
4. Technicians	P1	39	1 000	468 000
5. General Services Staff	GS 6/9	63	800	604 800
Sub Total		126	-	1 476 000
TOTAL SALARIES				1 718 400
B. CONSULTANCY SERVICES AND TRAVEL				143 000
C. TRAINING SUPPORT AND FELLOWSHIPS				400 000
D. MAINTENANCE, ADMINISTRATION, ETC				332 000
E. MISCELLANEOUS				190 000
GRAND TOTAL				2 783 400

TENTATIVE COST ESTIMATES FOR THE BUILDINGS, EQUIPMENT
AND OTHERS OF THE ARCSE

	US\$
1. Main building (1300 sq. meters) and workshop, garage (1200 sq. meters)	1,800,000
2. Preparation of demonstration/experimental site.....	400,000
3. Furniture for the offices of the main building	200,000
4. Technical and utilities equipment	100,000
5. Laboratories and training equipments	390,000
6. Equipment for workshops (Solar, Wind and Biomass testing equipment)	410,000
7. Vehicles (2 Trucks of 3.5 Ton each, 2 Land Rovers, 2 Service Cars)	250,000
8. Services (including installation of equipment, maintenance, administrative, etc.)	<u>350,000</u>
Total	<u>3,900,000</u> =====

ARCSE : DRAFT BUDGET ESTIMATES (RECAPITULATION)

US\$

A. Staff salaries, Consultancy Services Travel, Training (ANNEX II)	
1. Phase I (June - December 1982).....	183,400
2. Phase II (June - December 1982).....	240,350
3. Phase III (Jan. 1983 - May 1984).....	1,912,300
4. Phase IV (Nov. 1983 - May 1984).....	1,227,700
5. Phase V (June 1984 - May 1985).....	2,783,400
B. Buildings, Equipment and others (ANNEX IV)..	
3,9000,000	
TOTAL FOR THE FIRST THREE YEARS:	
10,246,450	

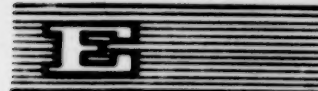
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UNITED NATIONS

ECONOMIC AND SOCIAL COUNCIL



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ECONOMIC COMMISSION FOR AFRICA

African Regional Centre for Solar Energy -
Inaugural Meeting of the Council

Addis Ababa, Ethiopia, 12 to 14 May 1982

JOB DESCRIPTIONS, VACANCY ANNOUNCEMENTS AND SELECTION

PROCEDURE FOR ARCSE NUCLEUS STAFF

1. The attached job descriptions and draft advertisements are prepared by the secretariat of ECA as draft documents for discussion under agenda item ten.
2. Draft job descriptions and draft vacancy announcements for the posts of ARCSE Executive Director and his Deputy are submitted as Annex I, IA and II, IIA. The working conditions and benefits are similar to those provided for by OAU. The Annexes III to IX, contain draft job descriptions only and cover the posts of CTA and Sectoral Directors.
3. After reaching an agreement on the attachments, the Council may wish to define a procedure that would allow for the installation of the Executive Director and his Deputy.
4. Among the several procedures that could be adopted by the meeting, one is the ARCSE Executive Board to pursue the selection procedure of the ARCSE Executive Director and his Deputy along the following lines:
 - (a) The Chairman of the Executive Board will be mandated to circulate the approved post advertisements not later than 30 days after the closing of the Meeting. He will send those documents to all States members of the African Regional Centre for Solar Energy by registered mail.
 - (b) In his mailing addressed to all Ministries of Foreign Affairs concerned he should be instructed to specify that the deadline for submitting the names and credentials of the candidates does not exceed three calendar months from the date of issue.

(c) The Chairman of the Executive Board and the Executive Secretary of ECA should be instructed to meet and start examining the proposed candidatures for the posts of Executive Director and his Deputy as soon as possible after the closing date. Should it appear however that the number of candidatures is insufficient to allow a reasonable choice, they may at their discretion delay the examination of the documents for another month, provided all ARCSE member States are immediately informed by telex urging the presentation of more candidates.

(d) After shortlisting the Chairman of the Executive Board shall submit the shortlisted candidates for the post of Executive Director and his Deputy for consideration at an Extraordinary Session of the Executive Board which will recommend the selected candidates to the Council for appointment.

5. As soon as the Executive Director and his Deputy are appointed, they will assess the candidates for the posts of CTA and Sectoral Directors and recommend the selected candidates to the Executive Board for appointment.

DRAFT JOB DESCRIPTION

1. Title of Post: Executive Director of the African Regional Centre for Solar Energy
2. Category: II
3. Duty Station:
4. Date of appointment:
5. Duration: Five years; eligible for reappointment for another term of five years
6. Duties: The Executive Director of the Centre shall be the Chief Executive Officer of the secretariat of the ARCSE. In accordance with the policies, decisions and directives of the Council and the Executive Board, he shall have the responsibility for the organization, direction and administration of the secretariat.

With the assistance of the other officials of the secretariat, the Executive Director shall be required to:

- (a) service and assist the organs of the Centre in the performance of their functions;
- (b) keep the functioning of the Centre under continuous review and, where appropriate, report the results of his review to the Council or the Executive Board for their action in that regard;
- (c) submit the draft work programme and corresponding budget of the Centre to the Executive Board for its consideration;
- (d) submit periodic reports on the activities of the Centre including financial statements of its income and expenditure to the Executive Board for its consideration;

(e) carry out the work programme of the Centre and co-ordinate the work of the Centre with that of such other institutions active or interested in the objectives of the Centre as the Executive Board may determine;

(f) undertake such work and studies and perform such services relating to the objectives of the Centre as may be assigned to him by the Council or the Executive Board and also make such proposals thereto as may assist in the efficient and harmonious functioning and development of the Centre, to the Council or the Executive Board as may be appropriate; and

(g) convene, in consultation with the Chairmen of the organs of the Centre, the meetings of such organs in accordance with the provisions of the Constitution of the Centre or as may be provided for thereunder.

The Executive Director of the Centre is entitled to attend and participate at all sessions of the organs of the Centre;

The Executive Director is an ex officio member of the Executive Board of the Centre and shall act as Secretary of the Executive Board;

The Executive Director shall also perform such functions as the Council or Executive Board may delegate to him under Article 8 paragraph 5 and Article 9 paragraph 6 of the ARCSE Constitution;

7. Qualifications and
Experience:

The candidate to the post of Executive Director of the African Regional Centre for Solar Energy should:

(a) be national of a country which is a member of the African Regional Centre for Solar Energy;

(b) be holder of an advanced degree in engineering, science or administration;

(c) possess substantial experience in technical field related to key solar energy applications, extending over not less than ten years out of which five years should be in natural energy resources management;

(d) possess considerable experience in the development, administration and management of a technical or scientific organization, preferably of subregional or regional character;

8. Language:

The candidate should be fluent in English or French, with a working knowledge of the other.

DRAFT VACANCY ANNOUNCEMENT FOR THE POST OF EXECUTIVE DIRECTOR
OF THE AFRICAN REGIONAL CENTRE FOR SOLAR ENERGY (ARCSE)

Applications are invited from suitably qualified candidates for the post of Executive Director of RARCSE.

1. Post Title: Executive Director
2. Level: D1
3. Date for entry on duty:
4. Vacancy notice issued:
5. Organizational Unit: African Regional Centre for Solar Energy
6. Duty Station:

7. Functions:

The Executive Director of the Centre shall be the Chief Executive Officer of the Secretariat. He shall, in accordance with the policies, decisions and directives of the Council and the Executive Board, have responsibility for the organization, direction and administration of the secretariat.

The Executive Director of the Centre shall with the assistance of the other officials of the secretariat among other things:

(a) service and assist the organs of the Centre in the performance of their functions;

(b) keep the functioning of the Centre under continuous review and, where appropriate, report the results of his review to the Council or the Executive Board for their action in that regard;

(c) submit the draft work programme and corresponding budget of the Centre to the Executive Board for its consideration;

(d) submit periodic reports on the activities of the Centre including financial statements of its income and expenditure to the Executive Board for its consideration;

(e) carry out the work programme of the Centre and co-ordinate the work of the Centre with that of such other institutions active or interested in the objectives of the Centre as the Executive Board may determine;

(f) undertake such work and studies and perform such services relating to the objectives of the Centre as may be assigned to him by the Council or the Executive Board and also make such proposals thereto as may assist in the efficient and harmonious functioning and development of the Centre, to the Council or the Executive Board as may be appropriate; and

(g) convene, in consultation with the chairmen of the organs of the Centre, the meetings of such organs in accordance with the provisions of the ARCSE Constitution or as may be provided for thereunder.

The Executive Director of the Centre shall be entitled to attend and participate at all sessions of the organs of the Centre.

The Executive Director shall be an ex officio member of the Executive Board of the Centre and shall act as Secretary of the Executive Board;

The Executive Director shall also perform such functions as the Council or Executive Board of the ARCSE, may delegate to him under Article 8 paragraph 5 and Article 9 paragraph 6 of the ARCSE Constitution.

8. Qualifications:

The candidate should:

- (a) be a national of a member State of the African Regional Centre for Solar Energy;
- (b) possess an advanced university degree in engineering, applied science in solar energy or other field related to the application of technology to development, including wind and biomass energy;
- (c) have a minimum of 10 years' post-qualification experience in senior positions of responsibility in the development of technology and its application to national, subregional and regional development;
- (d) possess considerable experience in the administration and management of a technological organization;
- (e) have experience in institution building in the field of technology;
- (f) possess qualities of leadership.

9. Languages: Fluency in English or French; working knowledge of the other
10. Salary: In the range of \$US17,140 - 20,110 per annum (tax free). Currently under review.
11. Other benefits: Dependency allowance, housing allowance, education allowance, post adjustment. (As per OAU conditions currently under review).
12. Term of Office: Five years, with possibility of extension for another term of five years.
13. Method of application: Six copies of the application with six copies detailed curriculum vitae of the applicant including employment record, and a certified passport size photograph of the applicant, should be sent to
- The Executive Secretary
UNECA
P.O. Box 3001
Addis Ababa
Ethiopia
- no later than..... Successful candidates shall be expected to take up their appointment about.....
14. Deadline for application:

JOB DESCRIPTION

1. Title of post: Deputy Executive Director of the African Regional Centre for Solar Energy
2. Category: DI/I
3. Duty Station:
4. Date of appointment:
5. Duration: Five years; eligible for reappointment for another term of five years.
6. Duties:

The Deputy Executive Director shall be under the direct authority of the Executive Director. He assists the Executive Director of the Centre in the discharge of his functions.

- The Deputy Executive Director of the Centre shall be in the absence of the Executive Director, the Chief Executive Officer of the secretariat of the Centre. He shall in accordance with policies, decisions and directives of the Council and the Executive Board, have responsibility for the organization, direction and administration of the secretariat of ARCSE. With the assistance of other officials of the Centre he shall be required to:

(a) Service and assist the organs of the Centre in the performance of their functions. He may act as Secretary of Executive Board and also perform such functions as the Council or Executive Board may delegate to him in the absence of the Executive Director (Article 8 paragraph 5 and Article 9 Paragraph 6 of the ARCSE Constitution);

(b) Keep the functioning of the Centre under continuous review and, where appropriate, report the results of his review to the Council or the Executive Board for their action in that regard;

(c) Submit the draft work programme and corresponding budget of the Centre to the Executive Board for its consideration;

(d) Submit periodic reports on the activities of the Centre including financial statements of its income and expenditure to the Executive Board for its consideration;

(e) Carry out the work programme of the Centre and co-ordinate the work of the Centre with that of such other institutions active or interested in the objectives of the Centre as the Executive Board may determine;

(f) Undertake such work and studies and perform such services relating to the objectives of the Centre as may be assigned to him by the Council or the Executive Board and also make such proposals thereto as may assist in the efficient and harmonious functioning and development of the Centre, to the Council or the Executive Board as may be appropriate, and

(g) Convene, in consultation with the chairmen of the organs of the Centre, the meetings of such organs in accordance with the provisions of the ARCSE Constitution or as may be provided for thereunder.

- The Deputy Executive Director of the Centre shall be entitled to attend and participate at all sessions of the organs of the Centre.

7. Qualifications and experience:

The candidate to the post of Deputy Executive Director of the African Regional Centre for Solar Energy should:

(a) be national of a country which is a member of the African Regional Centre for Solar Energy;

(b) be holder of an advanced University degree in engineering, applied sciences or administration;

(c) have a minimum practical experience of ten years in the field of technology development and sound experience in the administration of a technical organization;

8. Languages:

The candidate should be fluent in English or French with a working knowledge of the other.

DRAFT VACANCY ANNOUNCEMENT FOR THE POST
OF THE DEPUTY EXECUTIVE DIRECTOR OF THE AFRICAN REGIONAL CENTRE
FOR SOLAR ENERGY (ARCSE)

Applications are invited from suitably qualified candidates for the post of Deputy Executive Director of ARCSE

1. Post Title: Deputy Executive Director
2. Level: D1/I
3. Date for entry on duty:
4. Vacancy notice issued:
5. Orgazational Unit: African Regional Centre for Solar Energy
6. Duty Station:
7. Functions: The Deputy Executive Director functions under the authority of the Executive Director of ARCSE and assists him in the discharge of his functions.

The Deputy Executive Director of the Centre shall be in the absence of the Executive Director, the Chief Executive Officer of the Secretariat. He shall, in accordance with the policies, decisions and directives of the Council and the Executive Board, have responsibility for the organisation, direction and administration of the secretariat of ARCSE.

The Deputy Executive Director of the Centre shall in the absence of the Executive Director, with the assistance of the other officials of the secretariat, among other things:

(a) service and assist the organs of the Centre in the performance of their functions;

(b) keep the functioning of the Centre under continuous review and, where appropriate, report the results of his review to the Council or the Executive Board for their action in that regard;

(c) submit the draft work programme and corresponding budget of the Centre to the Executive Board for its consideration;

(d) submit periodic reports on the activities of the Centre including financial statements of its income and expenditure to the Executive Board for its consideration;

(e) carry out the work programme of the Centre and co-ordinate the work of the Centre with that of such other institutions active or interested in the objectives of the Centre as the Executive Board may determine;

(f) undertake such work and studies and perform such services relating to the objectives of the Centre as may be assigned to him by the Council or the Executive Board and also make such proposals thereto as may assist in the efficient and harmonious functioning and development of the Centre, to the Council or the Executive Board as may be appropriate; and

(g) convene, in consultation with the chairmen of the organs of the Centre, the meetings of such organs in accordance with the provisions of the ARCSE Constitution or as may be provided for thereunder.

- The Deputy Executive Director of the Centre shall be entitled to attend and participate at all sessions of the organs of the Centre.

- The Deputy Executive Director may act as Secretary of the Executive Board and shall also perform such functions as the Council or the Executive Board may delegate to the Executive Director of ARCSE under Article 8 paragraph 5 and Article 9 paragraph 6 of the ARCSE Constitution, during the absence of the Executive Director.

9. Languages:

The candidate should be fluent in English or French with a working knowledge of the other

10. Salary:

In the range of \$US17,140 - 20,110 per annum (tax free).
Currently under review.

8. Qualifications:

The candidate should:

- (a) be a national of a member State of the African Regional Centre for Solar Energy;
- (b) possess an advanced university degree in engineering, applied science in solar energy or other field related to the application of technology development, including wind and biomass energy;
- (c) have a minimum of 10 years' post qualification experience in senior positions of responsibility in the development of technology and its application to national development;
- (d) possess sound experience in the administration and management of a technological organization;
- (e) have experience in institution building in the field of technology;

9. Languages:

The candidate should be fluent in English or French with a working knowledge of the other

10. Salary

In the range of \$US17,140 - 20,110 per annum (tax free) currently under review

11. Other benefits: Dependency Allowance, Housing Allowance, Education Allowance, Post Adjustment as per OAU conditions currently under review.
12. Term of Office: Five years with possibility of extension of another term of five years.
13. Method of application: Six copies of the application with six copies of detailed curriculum vitae of the applicant including employment record, and a certified passport size photograph of the applicant should be sent to:

The Executive Secretary
UNECA
P.O. Box 3001
Addis Ababa
Ethiopia

no later than..... Successful candidates shall be expected to take up their appointment on or about.....

14. Deadline for application:

DRAFT JOB DESCRIPTION FOR THE CHIEF TECHNICAL ADVISOR (CTA)
OF THE AFRICAN REGIONAL CENTRE FOR SOLAR ENERGY (ARCSE)

1. Post Title: Chief Technical Advisor of the African Regional Centre for Solar Energy
2. Level: P-5
3. Duty Station:
4. Date of Appointment:
5. Duration: Two years with possibility of extension
6. Duties:

The Chief Technical Advisor (CTA) functions under the direct supervision of the Executive Director and Deputy Executive Director of the Centre. He shall be expected to assist technically the Executive Director and Deputy Executive Director in the establishment of the Centre and in the implementation of its regular work programme. During the preliminary phases of the establishment of the Centre, he will particularly assist in:

 - (a) finalizing the full-scale project and work plans of the Centre, including requirements for equipment and staff;
 - (b) preparing of job descriptions, evaluation of candidates, recruitment and assignment of technical staff from participating governments or donors;
 - (c) arranging the provisional office and designing of **permanent** buildings and laboratories;
 - (d) preparing of project submission documents, where contributions from sources other than regular are concerned;

- During the normal functioning of the Centre, the CTA shall be required to assist in:

 - (a) preparing regular work programme and budget of the centre;
 - (b) preparing of technical reports and programmes on research, development and training activities of the Centre.

(c) preparing of technical specifications, design and experimental manufacturing of equipment;

(d) organizing activities of the demonstration site

(e) technically supporting the conferences, meetings, etc. organized by the Centre;

(f) organizing technical assistance to member countries of the Centre.

7. Qualifications required: Advanced university degree in applied new and renewable sources of energy, applied sciences - physics or engineering with at least 20 years of practical experience in the field of applied energy sciences. He should, in general, be an all-rounded expert with a wide range of experience in the field of assessment, and utilization of new and renewable sources of energy. His professional experience should include technical and management activities, in solar, wind and biomass energy, including preparation of training programmes and project documents. Working experience in developing countries and previous involvement in regional projects in the field of natural resources is preferable.

8. Language:

Fluency in English or French, with a working knowledge of the other.

DRAFT JOB DESCRIPTION

- I. Title of post: DIRECTOR OF ADMINISTRATION Unit of the
African Regional Centre for Solar Energy.
- II. Level: P4
- III. Duty Station:
- IV. Date of Appointment:
- V. Duration of Appointment: Two years, with possibility of extension
- VI. Duties and Responsibilities:

Under the supervision of the Executive Director and Chief Technical Adviser and in co-operation with other Directors of Units the Director of Administration Unit is responsible to develop and implement administrative and financial policies and procedures; act as senior advisor on administrative and financial issues and policies; co-ordinate and monitor delegates personnel, finances, meetings, general services; act as senior liaison officer with senior officials on administrative and financial matters; ensure effective management of the Unit and perform other duties as required. In detail,

- (i) Develop and implement administrative and financial policies and procedures by:
- (a) drafting policy proposals for consideration of policy-making bodies and providing information as required;
 - (b) developing methodology for implementing the decisions of the Executive Board;
 - (c) reviewing administrative and financial proposals to insure consistency with established policy and current practice;
 - (d) developing long-term financial needs and plans;
 - (e) developing financial strategy;
- (ii) Act as senior adviser to the Executive Director as parr of the management team, with particular reference to administrative and financial issues and policies by:
- (a) advising on critical or potentially sensitive administrative and financial cases and recommending solutions;

- (b) recommending the establishment of precedent or the interpretation of rules and regulations.
- (iii) Co-ordinate and monitor the delegated administrative and financial services (personnel, finances, conferences, general services) to the others units by:
 - (a) developing and reviewing the policy of delegated financial authority and ensuring its appropriateness;
 - (b) monitoring delegated financial practices and ensuring consistency between various sectors of the centre;
 - (c) reviewing the actions of the field and committees of administration and finance and advising of inappropriate actions;
 - (d) advising on and authorizing exceptions to established practice, procedure and policy;
 - (e) ensuring that instructions and directives are issued and ongoing communications are maintained;
- (iv) Act as senior liaison officer with senior officials on administrative and financial matters by:
 - (a) meeting with senior officials of the national centres, governments, missions, (including ambassadors), etc.;
- (v) Ensure the effective management of the Unit by:
 - (a) establishing the objectives and goals and ensuring the achievement of same;
 - (b) establishing and monitoring an efficient procedural work flow and organizational structure;
 - (c) supervising senior officers of the Unit and ensuring effective supervision of professional officers (4) and general services staff (20);
 - (d) ensuring that an effective public relations attitude is maintained in the Unit;
 - (e) ensuring adequate financial and human resources, and allocating such resources to meet objectives;

- (f) reviewing administrative and financial cases and advising in resolutions.
- (vi) Perform other duties as required, such as:
 - (a) ensuring the preparation of the Centre's contribution to publications;
 - (b) participating in missions;
 - (c) performing special assignments as requested by the Executive Director;
 - (d) supporting whenever necessary, the section chiefs in the performance of their functions which includes participation in meetings and discussion with staff members.
 - (e) participating in recruitment missions;

VII. Special duties:

- Mobilization of external financial aid for the implementation of projects on new and renewable sources of energy development and utilization at national subregional and regional level;
- Mobilization of funds for regional programmes related to design and manufacturing of equipment using new and renewable sources of energy;
- Study establishment of financial institutions specialized in the field of new and renewable sources of energy at national, subregional and regional levels and securing co-ordination of their activities;
- enter into contracts of research and development with national and subregional centres;

VIII. Qualifications required: The candidate for the post of Director of administration Unit shall:

- (a) possess an advanced university degree in personnel/public/business administration and finance or the equivalent theoretical knowledge;
- (b) be, in general, an all-round^{ed} expert with a wide range of experience in the field of administration and financial ~~techniques~~.

- (c) have a minimum of 10 years post-qualification experience in senior positions and extensive progressively responsible experience in personnel management, particularly recruitment, including policy formulation and implementation at the international level;
- (d) possess experience in the administration and management of a Unit;
- (e) have working experience in developing countries and knowledge of financing international organs.
- (f) know recruitment practice and procedure with extensive specialization in personnel administration; skilled in management and interpersonal relations;
- (g) have experience in the financing of international projects;

IX. Languages: Fluency in English or French with a working knowledge of the other.

DRAFT JOB DESCRIPTION

1. Title of post: Director of DOCUMENTATION and INFORMATION UNIT of the African Regional Centre for Solar Energy.
2. Level: P4
3. Duty Station:
4. Date of Appointment:
5. Duration of Appointment: Two years with possibility of extension
6. Duties and Responsibilities:

Under the supervision of the Executive Director and Chief Technical Adviser and in co-operation with other Directors, the candidate is expected to:

 - (a) organize the activities of his Unit - assuming the responsibility for proper and efficient use of the relevant inputs;
 - (b) prepare and propose to the Chief Technical Adviser the planning of work of the Unit;
 - Specifically he is expected to:
 - effectively contribute towards the programme of Information/Documentation activities within the Unit;
 - Study, propose and have the responsibility of the implementation of information activities and library organization;
 - work towards the establishment of a data bank in solar energy and its derivatives;
 - prepare and submit regular progress reports and provisional or final professional reports as necessary and contribute to the preparations of the Centre's work programme and budget;

- Organize a continuous exchange of information with national, subregional, regional and International organizations involved in solar, wind and biomass energy activities
- Disseminate results of solar energy studies elaborated in the region or elsewhere in the world;
- To ensure that research findings are made the common property of the member States;
- Perform any other duties requested by the Chief Technical Adviser.

7. Qualifications Required:

The candidate should:

- (a) possess an advanced university degree in Science and Technology, applied science or engineering;
- (b) possess a qualification of modern bibliography technics including Informatic and Microfiche technics.
- (c) have a minimum of 10 years post-qualification experience in senior positions in the field of Information/Documentation;
- (d) possess experience in the administration and management of an Information/Documentation Section;
- (e) have experience in the editorial technics, compilation and preparation of information pamphlets;

8. Languages:

Fluency in English or French with working knowledge of the other.

DRAFT JOB DESCRIPTION

1. Title of post: DIRECTOR OF ENERGY STRATEGIES AND CO-OPERATION
UNIT of the African Regional Centre for Solar
Energy
2. Level: P4
3. Duty Station:
4. Date of appointment:
5. Duration of appointment: Two years, with possibility of extension
6. Duties and responsibilities: Under the supervision of the Executive Director
and Chief Technical Adviser and in co-operation
with other Directors of the Centre, the candidate
is expected to secure the undertaking of the
following duties and responsibilities by the Unit:
 - (a) Elaboration of an energy strategy at national,
subregional and regional levels with a view
to:
 - (i) better assessing the role of new and
renewable sources of energy in Africa;
 - (ii) obtaining a realistic evaluation of
the results obtained and difficulties
encountered in the development of
new and renewable sources of energy
in Africa;
 - (iii) enhancing development and utilization
of new and renewable sources of energy
in Africa;
 - (b) Alignment of the elaborated strategy with
the African strategy for the development and
utilization of new and renewable sources of
energy and adapt it to the national, sub-
regional and regional needs;
 - (c) Advise and participate in the elaboration of
national energy policies, national plans for
development and utilization of new and
renewable sources of energy and in the
interpretation of these plans into the overall
economic development of specific areas
(particularly rural) or countries.

- (d) Elaboration of models of programmes for the inventory of new and renewable sources of energy in Africa and inventory of needed manpower in the same field;
- (e) Preparation of short-medium and long-term strategies for research and development of new and renewable sources of energy in Africa, at all levels, including transfer and adaptation of technology;
- (f) Formulation of programmes and policies for information and training in the field of new and renewable sources of energy at all levels in Africa;
- (g) Advise in the assessment of energy needs and supply at national, subregional and regional levels in Africa.
- (h) Act as a liaison Unit with African national centres involved in new and renewable sources of energy activities and co-ordinator of research, development and applications activities in the same field at Africa level;
- (i) Contribute to the strengthening of the existing centres or to encourage the establishment of new national centres as necessary and establish subregional centres for purposes of liaison and co-ordination in the field of research and development of solar energy utilization;
- (j) Promote multinational co-operation with regard to the practical use of solar, wind and biomass energy;

7. Qualifications required:

The candidate should:

- (a) be preferably a national of a member State of the African Regional Centre for Solar Energy;
- (b) Possess an advanced university degree in science and technology, in the field of energy, etc.

- (c) in general, be an all-rounded ~~expert~~ with a wide range of experience in the field of every strategies and policies at national or subregional levels;
- (d) have a minimum of 10 years practical experience in senior positions;

8. Languages:

Fluency in English or French with working knowledge of the other.

DRAFT JOB DESCRIPTION

1. Title of post: DIRECTOR OF RESEARCH AND APPLICATIONS
UNIT of the African Regional Centre for
Solar Energy.
2. Level: P4
3. Duty Station:
4. Date of Appointment:
5. Duration of Appointment: Two years with possibility of extension
6. Duties and Responsibilities: Summary of the assigned duties: Under the supervision of the Executive Director and Chief Technical Adviser and in co-operation with the other Directors, the Director of the Research and Application Unit is responsible to develop and implement research and applications policies and procedures of the centre; act as senior adviser on research and application issues and policies; co-ordinate and monitor solar energy, wind energy and biomass energy sections; ensure effective management of the Unit; and perform other duties as required.

The candidate will have the responsibility to:
 - (a) Organize the activities of the Unit and act also as Chief of Solar Energy Unit;
 - (b) prepare and propose to the Chief Technical Adviser the planning of work of the sections of the Unit;
 - (c) effectively contribute towards the preparation and implementation of the programme of work of the Unit and closely collaborate with Design, Manufacturing and Maintenance Unit;

- (d) Study, propose and have the responsibility of the implementation of research, applications, transfer and adoption of technology and test activities in three sections: Solar Energy, Wind Energy, and Biomass energy.
- (e) strengthen research in solar energy and its derivatives and undertake experimentation and applications of such energy, at national, subregional and regional levels in Africa;
- (f) Aid member States in carrying out fundamental research and carry out research and products development as necessary;
- (g) To do everything in the Unit's power to improve the conditions in which research is conducted at all levels and to enhance the working conditions in which research is conducted at all levels and to enhance the working conditions of researchers;
- (h) Prepare and submit regular progress reports and professional reports as necessary.
- (i) Perform any other duties requested by the Executive Director or the Chief Technical Adviser.

7. Qualifications Required:

The candidate should:

- (a) Possess an advanced university degree in physics, applied sciences, engineering or equivalent;
- (b) in general be an all-round expert with a wide range of experience in the field of Research and Applications of New and Renewable Sources of Energy.

- (c) have a minimum of 10 years practical experience.
- (d) possess experience in the administration and management of a Research and Applications Unit;
 - Working experience in developing countries and knowledge of appropriate Technologies is preferable.

8. Languages:

Fluency in English or French with working knowledge of the other.

DRAFT JOB DESCRIPTION

1. Title of post: DIRECTOR OF DESIGN, MANUFACTURING AND MAINTENANCE UNIT of the African Regional Centre for Solar Energy.
2. Level: P4
3. Duty Station
4. Date of Appointment:
5. Duration of Appointment: Two years, with possibility of extension
6. Duties and responsibilities: Under the supervision of the Executive Director and Chief Technical Adviser and in co-operation with the other Directors, the candidate is expected to: develop and implement design, manufacturing and maintenance policies and procedures of the Centre; act as senior advisor on above issues; co-ordinate and monitor delegated design and manufacturing in solar-wind-biomass workshops and secure the maintenance activities; act as liaison office with senior officials involved in research and development activities of the Centre; ensure effective management of the Unit; and perform other duties as required. The candidate organizes the activities of his Unit assuming the responsibility for proper and efficient use of the relevant input. Within this framework he:

- (a) prepares and proposes to the Chief Technical Adviser the planning of work;
- (b) effectively contributes towards the programme of work of the Unit;
- (c) has the responsibility of the implementation of design, manufacture and maintenance works in five sections; design, solar workshop, wind workshop, biomass workshop, and maintenance;
- (d) Test products, systems or appliances for performance, reliability and adaptability and manufactures prototypes as design within the Unit in collaboration with Research and Applications Unit;
- (e) Encourage popularization of local manufacture of equipment using, solar wind and biomass energy and promote local industries in the field of solar and its derivatives technology so as to reduce the cost of equipment making use of these energies in Africa;
- (f) co-ordinates the activities of the transport and maintenance team;
- (g) Prepares and submits regular progress reports and professional reports as necessary,
- (h) performs any other duties requested by the Executive Director or Chief Technical Adviser

7. Qualifications required:

The candidate should:

- (a) Possess an advanced university degree in applied science, mechanics, engineering or equivalent;

- (b) in general be an all-rounded expert with a wide range of experience in the field of design, manufacturing and maintenance of equipment using new and Renewable Sources of Energy including mechanical equipment;
- (c) have a minimum of 10 years practical experience;
- (d) possess experience in the administration and management of a design, manufacturing and maintenance Unit;
 - Working experience in developing countries and knowledge of appropriate technologies is preferable;

8. Languages:

Fluency in English or French with working knowledge of the other.

DRAFT JOB DESCRIPTION

1. Title of post: DIRECTOR OF TRAINING UNIT Of the African Regional Centre for Solar Energy
2. Level: P4
3. Duty Station:
4. Date of Appointment:
5. Duration of Appointment: Two years, with possibility of extension
6. Duties and Responsibilities: Under the supervision of the Executive Director and Chief Technical Adviser and in co-operation with the other Directors the candidate is expected to:
 - (a) organize the activities of his Unit assuming the responsibility for proper and efficient use of the training techniques;
 - (b) prepare and propose to the Chief Technical Adviser the programme of training activities, including the fellowships for African candidates;
 - (c) effectively contribute towards the programme of training of staff of the Centre;
 - (d) Study, suggest, advise on, and support training programmes at national levels and encourage the introduction of studies of new energy utilization in school and university curricula;
 - (e) prepare and submit regular progress reports and provisional or final professional reports as necessary and contribute to the preparation of the Centre's work programme and budget,
 - (f) In collaboration with other Units of the Centre and by means of seminars,

workshops, meetings, exhibitions of equipment and films, to arouse awareness among member States of the region of the sources, uses and benefits of solar energy;

- (g) Organize training of African candidates within the Centre; organize study tours and working visits to the Centre; prepare fellowships programme; and provide highly qualified expertise to the national centres involved in Solar, wind and biomass energy activities;
- (h) perform any other duties requested by the Chief Technical Adviser.

7. Qualifications Required:

The candidate should:

- (a) possess an advanced university degree in engineering or applied sciences (solar, wind or biomass energy);
- (b) possess a qualification in modern training technics, including psychology and communication technics;
- (c) have a minimum of 10 years post-qualification experience in senior positions related to training;
- (d) possess great experience in the preparation of training programmes at various levels;
- (e) have experience in training technics and advisory capability in formulations of national training programmes in the field of new and renewable sources of energy;

8. Languages:

Fluency in English, or French with a working knowledge of the other.